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INDEXED

PATENT SPECIFICATION

DRAWINGS ATTACHED

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984.450



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COMPLETE SPECIFICATION

Improvements in or relating to Carriers for Rimmed Cylindrical Cans

5 We, PRINT PROCESSES SALES LIMITED, a Company registered under the Laws of Great Britain, of Epsom Street, Bow, London, E.3., do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

10 This invention relates to a carrier for one or more rimmed cylindrical cans and is in part divided out of the present applicant's copending British Patent Applications No. 28592 of 1961 and No. 30403 of 1961. (Serial Nos. 984448 and 984449).

15 The invention has for its object to provide an improved and simple carrier which may be securely fitted to a rimmed can or cans to facilitate the carrying thereof.

20 The carrier according to the invention comprises an upper generally horizontal portion, and two portions extending downwardly from opposite sides of the upper portion, such depending portions having a depth less than the height of the can or cans to be carried and being provided with generally horizontal elongated slots adjacent to their upper edges for receiving diametrically opposite regions of the can or each can, whereby such can or each can is wholly suspended

25 by its rim, without bottom support, between such depending portions, and such depending portions having at least one cut or slit extending generally downwardly from each rim-receiving slot to permit such depending portions to yield to accommodate the body of the can or each can below the supported regions of the rim thereof.

30 With this arrangement, it will be appreciated that due to the opening out of the slits or cuts the rim of the can or each can is supported by the edge of each depend-

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ing portion along substantially the whole length of the rim-receiving slot therein.

Each cut or slit preferably extends downwardly from a rim-receiving slot for only a part of the distance from such slot to the lower edge of the depending portion wherein such cut or slit is formed.

45 The number of cuts or slits associated with each rim-receiving slot may vary. In one arrangement, each cut or slit extends downwardly from the centre of a rim-receiving slot. In another arrangement, a pair of cuts or slits are associated with each rim-receiving slot, each such pair of cuts or slits extending downwardly from the ends of a rim-receiving slot.

50 The carrier may be made in various ways and of various materials, but in several convenient practical constructions the upper portion and the two depending portions are formed integrally with one another as parts of a folded cardboard blank. In these constructions, the elongated slots are preferably formed by partly severing narrow elongated sections from the blank at the folding lines between the upper portion and the depending portions, whereby when the blank is folded, the partly severed sections constitute extensions of the upper portion projecting outwardly over the rim-receiving slots in the depending portions.

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60 In one convenient practical construction, the carrier is made from a rectangular cardboard blank having two parallel longitudinal scored folding lines which divide such blank into a central panel for constituting the upper portion of the carrier and two outer panels for constituting the depending portions of the carrier. In another construction, the carrier is made from a cardboard blank including a rectangular part having six parallel longi-

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[Price 4s. 6d.]

- itudinal scored folding lines dividing such rectangular part symmetrically into a central panel and an inner panel, an intermediate panel and an outer panel on each side of the central panel, the carrier being formed by folding the inner panels downwardly from the central panel, folding the intermediate panels back inside the respective inner panels to constitute the depending portions, and folding the outer panels inwardly to lie substantially flat against the underside of the central panel to constitute the upper portion.
- A handle may be attached to the upper portion of the carrier, such handle being formed for example by one or more upwardly folded perforated panels on the cardboard blank in the case of the practical constructions above mentioned.
- The invention may be carried into practice in various ways but some convenient practical constructions of can carrier according thereto will now be described by way of example with reference to the accompanying drawings, in which
- Figure 1 is a plan view of a cardboard blank to be folded to form a preferred construction of carrier,
- Figure 2 is a plan view of the preferred carrier in use,
- Figure 3 is a side view of the preferred carrier in use,
- Figure 4 is an end view of the preferred carrier in use,
- Figure 5 is a plan view of a modified cardboard blank to be folded to form a modified construction of carrier,
- Figure 6 is a plan view of the modified carrier in use,
- Figure 7 is an end view of the modified carrier in use,
- Figure 8 is a plan view of a further cardboard blank to be folded to form a further construction of carrier,
- Figure 9 is an enlarged transverse sectional view of the further construction of carrier,
- Figure 10 is an enlarged longitudinal sectional view of the further construction of carrier,
- Figure 11 is a plan view of the further construction of carrier in use, and
- Figure 12 is a second enlarged transverse sectional view of the further construction of carrier but showing the carrier in use.
- In Figures 1, 5 and 8 of these drawings, full lines are used to represent cuts or slits and broken lines to indicate scored fold lines.
- In the preferred construction, the cardboard blank (see Figure 1) consists of a rectangular piece of relatively stiff cardboard scored to facilitate folding along two lines parallel to its longitudinal side edges. For three rimmed cylindrical cans several inches high and of say just over two and a quarter inches diameter and outward peripheral rims top and bottom of about one eighth of an inch radial projection, the blank may be about eight inches long and just under four and half inches wide, the scored fold lines B symmetrically dividing such blank into a central panel A¹ about two and a quarter inches wide and two outer panels A² just over one inch wide, which is appreciably less than the height of the cans to be carried.
- Interrupting the scored fold lines B between the central panel A¹ and the outer panels A² are a number of elongated pieces C¹ partly cut out from the outer flaps A² in corresponding positions therein. For the carrier to carry three cans as above-mentioned, three such partly cut out pieces C¹ are provided in each outer panel A², each for example about one eighth of an inch wide, the depth of the rims on the cans, and about one and a half inches long, with spacings between them of about one inch and spacings of about three quarters of an inch between the two end slots and the transverse edges of the blank. Each such elongated piece is preferably formed as illustrated by making a slit C about one and a half inches long in the outer panel A² at a distance of about one eighth of an inch from the fold line B, together with two short slits C¹ extending from the ends of such longitudinal slit C to such fold line B. The partly cut out pieces C¹ thus form extensions of the central panel on opposite longitudinal side edges thereof, and it is preferred, as shown, that the fold lines B extend only along those parts of the blank between such extensions C¹ and not through such extensions.
- The outer panels A² are also provided with slits or cuts D extending transversely from the centre of each rim-receiving slot towards the adjacent longitudinal edge of the blank. These slits or cuts D are conveniently made about one half an inch long, about one half of the width of the outer panels A².
- When the carrier is required for use (see Figures 2, 3 and 4), the three rimmed cans G to be carried are placed in line and the blank placed on top of such cans so that the central panel A¹ just covers them. The outer panels A² are then folded downwardly from the central panel A¹. When this folding operation is effected, the extensions C¹ on the central panel A¹ will project outwardly beyond the outer flaps A² over slots left in such outer flaps A² due to the partial cutting out of such extensions. These slots receive the rims G¹ at the tops of the cans G. Thus, when the carrier is lifted, each can G is wholly suspended from two diametrically opposite regions of its rim G¹, without bottom support. The central panel A¹ lies substantially flat against the tops of the cans G with the extensions C¹ thereon engaging the tops of the rims G¹, whilst the transverse slits D in the outer panels A² are slightly

opened out to accommodate the top portions of the cylindrical walls of the cans G. It will be appreciated that due to this opening out of the slits D, the outer panels are permitted somewhat to yield to shape themselves to the bodies of the cans G, so that the rim G' of each can G is supported by the edge of the outer panel A² along substantially the whole length of the appropriate rim-receiving slot therein.

Once the carrier has been fitted to the cans G there is substantially no tendency for the outer panels A² to fold back outwardly and upwardly, since substantially the only force acting on such flaps is that due to the weight of the cans applied in a downward direction through the can rims to the upper edges of such flaps, and it is found in practice that the carrier, which will normally be held by a grip applied to opposite sides thereof adjacent to the centre can, may be swung about quite forcibly without dislodging the cans.

A modified arrangement of cardboard blank is shown in Figure 5, such blank being scored to facilitate folding along five lines parallel to two of its opposite side edges, for convenience termed the longitudinal side edges. The scored fold lines divide the blank into six panels, of which the two intermediate panels A¹ corresponding to the central panel and the two outer panels A² correspond to the outer panels of the first construction. The scored fold lines B between these intermediate and outer panels A¹ and A² are interrupted by rim-receiving slots formed in the same manner as in the first construction, as indicated by use of the same reference letters.

The inner panels A constitute means for forming a handle on the carrier, each such portion A having a cut-out E near its centre of sufficient size to receive the fingers of a hand, and conveniently a flap E' scored for folding is left attached to the longitudinal edge of the cut-out E in one such portion A so that when the two inner portions are folded on top of one another and secured together, as later described, such flap E' may be folded through the cut-out in the other inner portion to afford a more comfortable grip.

In forming the carrier from the blank, such blank is first folded about its central scored line B¹. The two inner portions A are secured together in close contact by means of staples or clips F, as indicated in Figure 6, or alternatively by glueing, thereby forming a hand grip of double thickness held uppermost in use.

For transport or storage purposes, the carrier is packed in the above-described condition wherein the two halves of the blank lie flat against one another.

When the carrier is required for use (see Figures 6 and 7), the intermediate panels A¹

and the outer panels A² attached thereto are folded outwardly in opposite directions from the hand grip about the intermediate scored fold lines B², whereby such intermediate and outer panels A¹ and A² lie in a single plane and constitute the equivalent of the blank above described with reference to Figure 1, and is applied to the cans in the same manner as such earlier construction. As before, the slits or cuts D in the outer panels A² open out to permit such outer panels A² to conform to the body of each can G below the rim G' thereof, whereby such rim G' is supported along substantially the whole length of the appropriate rim-receiving slot in each such panel A².

A further arrangement of cardboard blank, for forming a further construction of can carrier, is shown in Figure 8. In this arrangement, the blank consists of a piece of relatively stiff cardboard having a main rectangular part scored to facilitate folding along six lines parallel to two opposite side edges of such part, these again being termed the longitudinal side edges for convenience of description. The scored fold lines divide the rectangular part of the blank into seven parts, a central panel H¹, say two and half inches wide, and on each side thereof three portions, conveniently termed the inner portions H², intermediate portions H³, and outer portions H⁴, the first two such portions being about one and a quarter inches wide and the outer portions just over one inch wide. These dimensions are to suit a carrier for three rimmed cans of say two and a quarter inches diameter as before.

Adjoining the outer portions H⁴ through longitudinal scored fold lines are two outer flaps H⁵ of reduced length each pierced with a wide longitudinal slot E. The central panel H¹ has a central elongated longitudinal slot J, conveniently formed by the folding back of two partly cut out elongated pieces on either side of a longitudinal slit between them, through which the outer flaps H⁵ are received when the blank is folded (see Figures 9 and 10), such flaps extending side by side upwardly through the slot J to form a hand-grip similar to that described with reference to the previous construction of carrier.

Adjoining the ends of the central panel H¹ and the ends of the inner portions H² connected thereto are a pair of end flaps, the blank scored transversely to facilitate folding of such end flaps relatively to such central panel H¹ and the adjacent inner portions H². Each end flap is longitudinally scored to facilitate folding the part H⁶ thereof in line with the central panel H¹ relatively to the two adjacent parts H² in line with the inner portions H², and transversely scored to facilitate folding an extension H⁷ on such end flap in line with the central panel H¹. The parts H⁷ of the end flap in

line with the inner portions H^2 are diagonally scored so that these parts form tuck-ins in the well known manner when the extension H^4 on the flap is folded inwardly on to the part H^4 of the flap adjoining the central panel H^1 , the whole of such end flap together with the inner portions H^2 adjoining the central panel H^1 having first been folded downwardly from such central panel H^1 (see Figures 9 and 10). The end flaps thus serve effectively to lock the inner portions H^2 in their downwardly folded positions relative to the central panel H^1 .

Interrupting the scored fold lines between the intermediate and outer portions H^3 and H^4 are a number of spaced elongated pieces C^2 partly severed from the intermediate portions H^3 to form extensions on the outer portions H^4 and to form slots in the intermediate portions in a manner analogous to the formation of the rim-receiving slots in the two previous constructions. The same reference letters as before are employed to indicate the slits C and C^1 employed to form such slots and the associated extensions C^2 on the outer portions H^4 .

The intermediate portions H^3 are also provided with transverse slits D (say half an inch long) extending from the ends of each extension C^2 inwardly of the blank, such slits D thus lying in line with and forming continuations of the short slits C^1 above-mentioned which assist in forming the slots in such intermediate portions H^3 .

In forming the carrier from the above-described blank the inner portions H^2 and the end flaps adjoining the central panel H^1 are folded downwardly from such central panel H^1 in the manner above-mentioned. The pierced outer flaps H^4 are then pushed upwardly through the slot J in the central panel H^1 to form a hand-grip. Subsequently the intermediate and outer portions H^3 and H^4 are pushed upwardly to fold along the scored lines between them so that the outer portions H^4 lie flat against the underside of the central panel H^1 respectively on opposite sides of the central slot J therein. The relative dimensions of the parts of the blank are such that when so folded, the edges of the extension C^2 on the outer portions H^4 abut against the inside of the folded down inner portions H^2 , and the intermediate portions H^3 are inclined inwardly at a slight angle to the inner portions H^2 so that the upper ends such intermediate portions H^3 are spaced slightly inwardly from the upper ends of such inner portions H^2 . The pieces C^2 partly severed from the intermediate portions H^3 and constituting the extensions on the outer portions H^4 now lying flat against the underside of the central panel H^1 form the slots in the intermediate portions H^3 adjacent to the underside of the central panel H^1 for receiving the rims G^1 of the

cans G to be carried (see Figures 11 and 12), the reception of such rims G^1 being permitted due to the slight spacing behind the upper edges of such intermediate portions H^3 in front of the upper edges of the inner portions H^2 . It will be appreciated that due to the inward inclinations of the intermediate portions H^3 the end edges of such portions H^3 lie inwardly of the edges of the folded in extensions H^4 on the end flaps, and thus serve to ensure that such end flaps cannot become unfolded to release the carrier from its folded condition. As shown, the ends of the extensions H^4 on such end flaps may conveniently be made of slightly reduced width and the end edges of the intermediate portions H^3 may be provided with small cut-outs which, when the blank is folded, are disposed adjacent to the underside of the central panel for engagement with the corners of such shaped end flaps.

For transport and storage purposes the carrier is packed as a flat blank and when required for use folded in the above-described manner. The three cans G to be carried are placed in line and the carrier is fitted on top of them. The rims G^1 at the tops of the cans G engage in the slots in the intermediate portions H^3 so that when the carrier is lifted each can is suspended from two diametrically opposite regions of its rim G^1 . The transverse slits D in the intermediate portions H^3 are slightly opened out to accommodate the top portions of the cylindrical walls of the cans G , and it will be appreciated that due to this opening out of the slits the rim G^1 of each can G is supported by the edge of the intermediate portion H^3 along substantially the whole length of the appropriate slot therein. The outer portions H^4 and the central panel H^1 above such portions lie substantially flat against the tops of the cans G . It is found in practice that once the carrier has been fitted to the cans in the above-described manner the carrier may be swung about quite forcibly without dislodging such cans.

It will be appreciated that the above-described arrangements may be modified in various ways within the scope of the invention, and that the carrier may be made so as to carry only one or two or alternatively more than three rimmed cans, a cardboard blank of appropriate size being used to form such carrier.

WHAT WE CLAIM IS:—

1. A carrier for one or more rimmed cylindrical cans and comprising an upper generally horizontal portion, and two portions extending downwardly from opposite sides of the upper portion, such depending portions having a depth less than the height of the can or cans to be carried and being provided

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- 5 with generally horizontal elongated slots ad-
jacent to their upper edges for receiving dia-
metrically opposite regions of the can or each
can whereby such can or each can
is wholly suspended by its rim, without
bottom support, between such depending por-
tions, and such depending portions having
at least one cut or slit extending generally
downwardly from each rim-receiving slot to
10 permit such depending portions to yield to
accommodate the body of the can or each
can below the supported regions of the rim
thereof.
- 15 2. A carrier as claimed in Claim 1 in
which each cut or slit extends downwardly
from a rim-receiving slot for only a part of
the distance from such slot to the lower
edge of the depending portion wherein such
cut or slit is formed.
- 20 3. A carrier as claimed in Claim 1 or
Claim 2 in which each cut or slit extends
downwardly from the centre of a rim-receiv-
ing slot.
- 25 4. A carrier as claimed in Claim 1 or
Claim 2 having a pair of cuts or slits for
each rim-receiving slot, each such pair of
cuts or slits extending downwardly from the
ends of a rim-receiving slot.
- 30 5. A carrier as claimed in any one of
Claims 1—4 in which the upper portion and
the two depending portions are formed in-
tegrally with one another as parts of a folded
cardboard blank.
- 35 6. A carrier as claimed in Claim 5 in
which the elongated slots are formed by
partly severing narrow elongated sections
from the blank at the folding lines between
the upper portion and the depending portions,
whereby, when the blank is folded, the partly
40 severed sections constitute extensions of the

upper portion projecting outwardly over the
rim-receiving slots in the depending por-
tions.

7. A carrier as claimed in Claim 5 or
Claim 6 in which the carrier is made from 45
a rectangular cardboard blank having two
parallel longitudinal scored folding lines which
divide such blank into a central panel for
constituting the upper portion of the carrier
and two outer panels for constituting the 50
depending portions of the carrier.

8. A carrier as claimed in Claim 5 or
Claim 6 in which the carrier is made from
a cardboard blank including a rectangular
part having six parallel longitudinal scored 55
folding lines dividing such rectangular part
symmetrically into central panel and an inner
panel, an intermediate panel and an outer
panel on each side of the central panel, the
carrier being formed by folding the inner 60
panels downwardly from the central panel,
folding the intermediate panels back inside
the respective inner panels to constitute the
depending portions, and folding the outer
panels inwardly to lie substantially flat against 65
the underside of the central panel to con-
stitute the upper portion.

9. A carrier as claimed in any one of
Claims 1—8 including a handle attached to
the upper portion. 70

10. A carrier as claimed in Claim 9 in
which the handle is formed by one or more
upwardly folded perforated panels on the
cardboard blank.

11. A carrier for one or more rimmed 75
cylindrical cans substantially as described
with reference to Figures 1—4 of the accom-
panying drawings.

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Agent for the Applicants.

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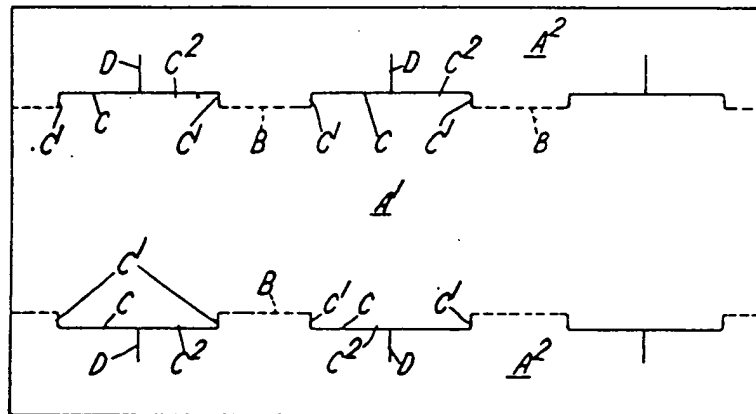
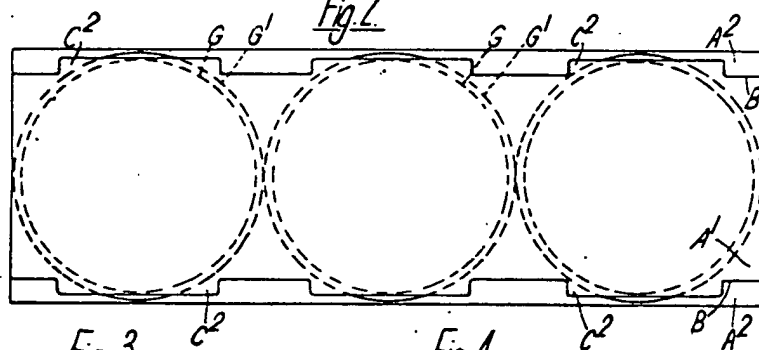
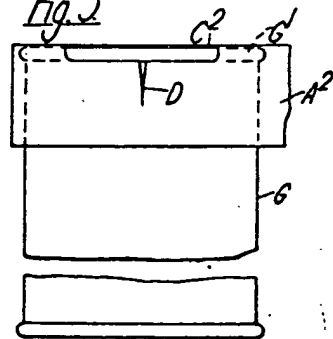
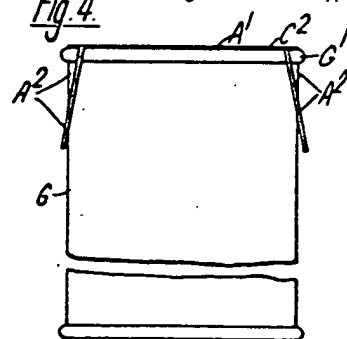
Fig. 1.Fig. 2.Fig. 3.Fig. 4.

Fig. 5.

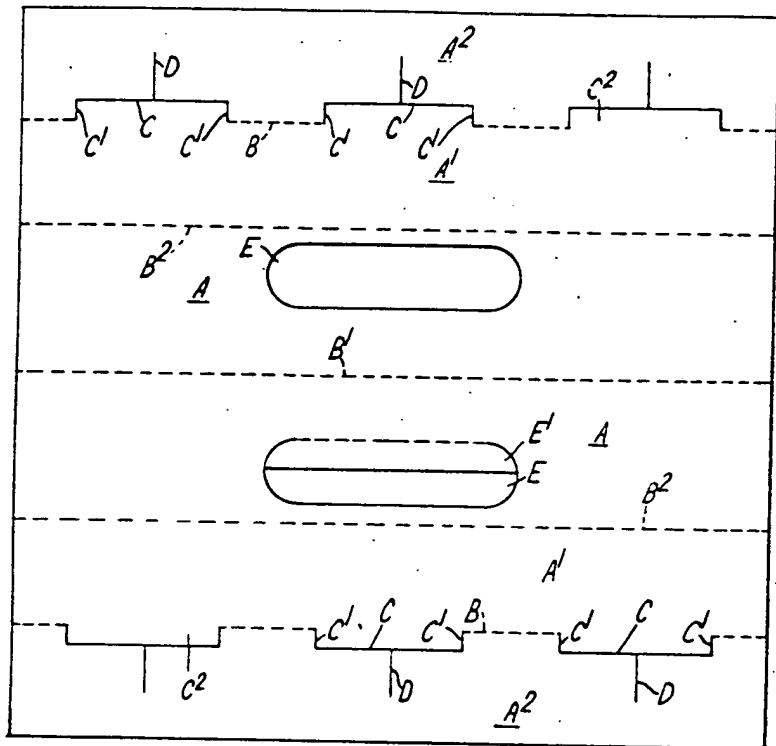
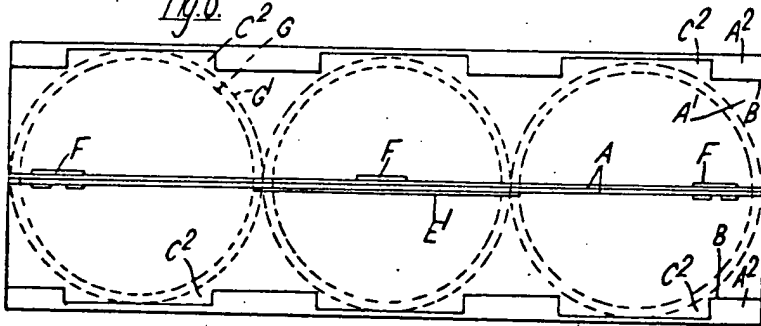


Fig. 6.



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Fig. 7

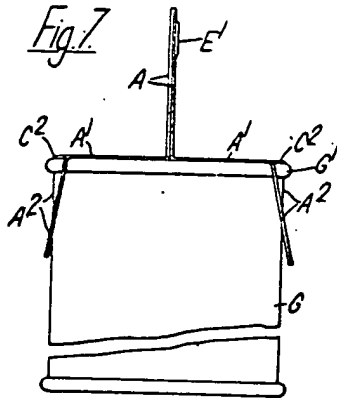


Fig. 8

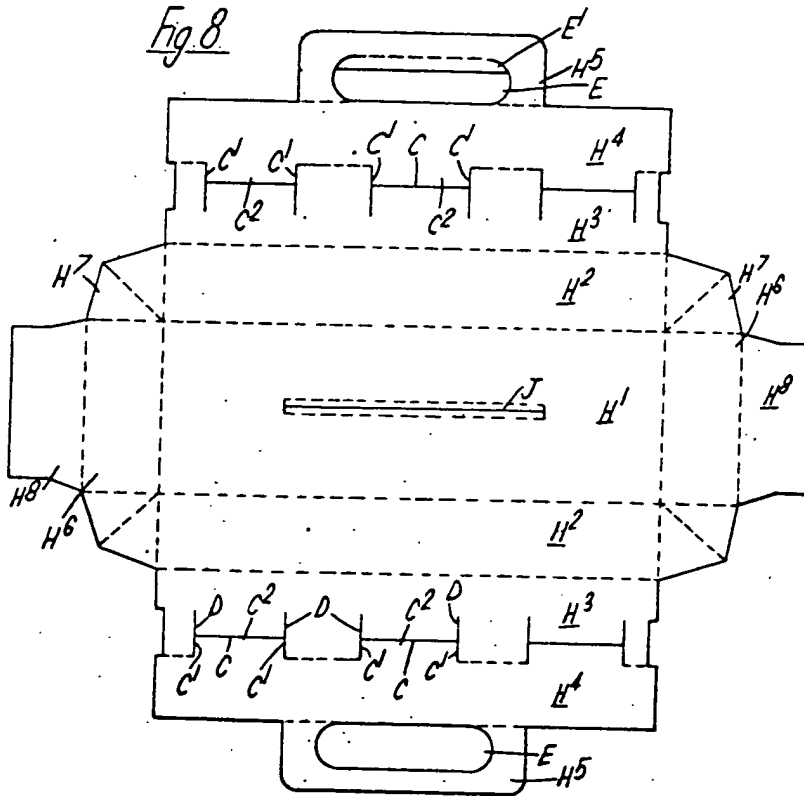


Fig. 9

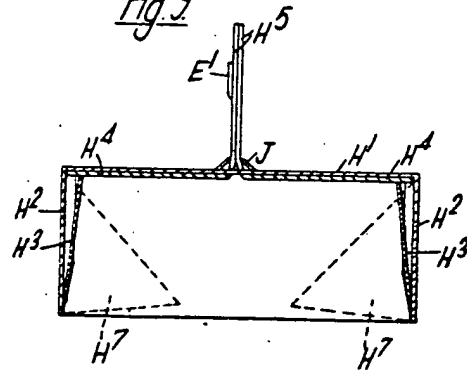
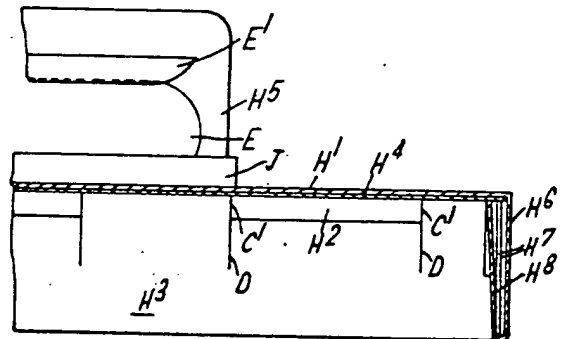


Fig. 10



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Fig. 11

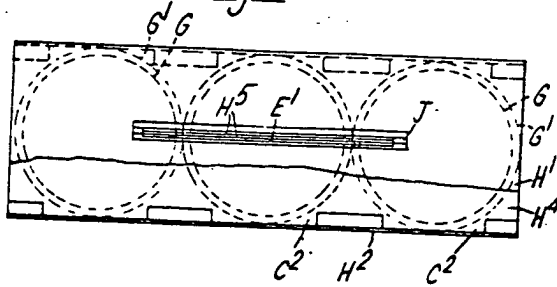


Fig. 12

